

Report of Findings

Parker (Catina) v City of Gulfport, et al.

Report Prepared for:

Sam A. Harton, Esquire Romanucci & Blandin, LLC 321 N. Clark Street, Suite 900 Chicago, Illinois 60654

Report Prepared by:

John Stamm, P.E. Senior Engineer

Date of Report:

Friday, June 30, 2023

Dear Ms. Harton,

The following constitutes my report in the above referenced matter. In preparation for this report, I have reviewed and analyzed the sources of information shown in Appendix A. In addition, I have completed an inspection of the subject accident site and two exemplar trucks. My CV, testimony list and Fusion Engineering fee schedule are attached as Appendix B.

All opinions and conclusions stated in this report are based on my work to date on this matter, as well as my background, education, training, and experience, and are stated to a reasonable degree of engineering certainty.

1.0 Purpose

Fusion Engineering was asked to analyze and reconstruct an accident that occurred on February 1, 2020, where the driver of a GMC pickup truck was shot and killed by a police officer in Gulfport, Mississippi.

2.0 Incident Background

On the evening of Friday, January 31, 2020, Stephanie Baldwin hosted a party at her house that was located at 210 25th Street in Gulfport, Mississippi. During the party one of the guests, Derrian Markray, became upset and several people unsuccessfully attempted to calm him down. At some point it was decided that Leonard Parker Jr. would drive Mr. Markray to a hotel room. Just prior to Mr. Markray and Mr. Parker leaving, Maxine Owens, another guest at the party, called 911 at 2:49:47 a.m. and said that Mr. Markray "is fighting everyone and needs to leave residence". At 2:51:37 a.m., Police Officer Jason Cuevas received a call from dispatch and is enroute to 210 25th street. At 2:55:19 a.m., Officer Cuevas arrives at 25th Street with his blue lights and siren not activated and parks his vehicle approximately two houses east of 210 25th Street. Officer Cuevas exits his vehicle and begins to walk west and look for the correct residence and directs his flashlight onto the mailbox at 208 25th Street. While Officer Cuevas is attempting to read the address on the mailbox, he noticed a vehicle backing out and heading south from the adjacent residence (210 25th Street) and then hit a mailbox on the south side of the street (213 25th Street). Officer Cuevas starts walking towards the vehicle and the vehicle pulls away from the mailbox it hit and starts heading east. At 2:55:49 a.m., 30 seconds after arriving to the scene, Officer Cuevas advises dispatch that shots were fired. During these 30 seconds officer Cuevas discharged his firearm

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three times into the front of the vehicle on the driver's side and fatally wounded Mr. Parker. Officer Cuevas did not have his body camera or dash camera recording at the time of the incident.¹

3.0 Subject Equipment

Mr. Parker was driving a 2014 GMC Sierra 1500 SLE Crew Cab 2WD bearing the VIN 3GTP1UEC7EG178416. The truck was RWD, had a 5.3L V8 engine, a wheelbase of 143.5 inches, a turning radius of 23.6 feet and a curb weight of 4,942 lbs. The truck was equipped with Pathfinder HT 265/70R17 tires. A post-accident photograph of the truck at its point of rest (POR) is shown in Figure 1.



Figure 1: Post-accident photograph (BLT_0202) taken on February 1, 2020, at 7:51:22 a.m.

¹ PL Parker 001012-1019, PL Parker 001225-1227



4.0 Accident Scene

As shown in Figure 2, the east/west 25th Street is accessed by turning west from the north/south Oak Avenue and dead ends after 5-6 houses on both sides of the road. The subject truck was parked facing north in the front yard of 210 25th Street. The truck was then backed up in a southern direction before impacting the mailbox across the street at 213 25th Street. The impacted mailbox was located just south of 25th Street and just east of the 213 25th Street driveway. The impacted mailbox and 210 25th Street yard that the truck backed up from is shown in Figure 3. The vehicles shown in the driveway and yard of 210 25th Street were parked to the east of the path taken by the subject truck as it backed up. The red arrow in Figure 3 points to the disturbed dirt behind the mailbox post that is consistent with the mailbox deflecting rearward during an impact.



Figure 2: Annotated Google Maps' Aerial View of 25th Street





Figure 3: Annotated post-accident photograph (BLT_0129) taken on February 1, 2020, at 7:01:58 a.m. (left) and annotated post-accident photograph (BLT_0242) taken on February 1, 2020, at 7:59:58 a.m. (right)

As shown in Figure 4, Officer Cuevas parked his vehicle on the north side of 25th Street across the street from the driveway of 207 25th Street. The red arrow in Figure 5 identifies the 208 25th Street mailbox that Officer Cuevas was walking towards when he noticed the truck backing up from the yard of 210 25th Street. Figure 5 also shows the parked location of Officer Cuevas' police vehicle and the headlights of the subject truck at its point of rest. As shown in Figure 6, the truck's post-accident point of rest is across the street from the 208 25th Street mailbox and just west of the western face of the 207 25th Street house.





Figure 4: Annotated post-accident photograph (BLT_0035) taken on February 1, 2020, at 6:22:27 a.m.



Figure 5: Annotated post-accident photograph (BLT_0037) taken on February 1, 2020, at 6:23:12 a.m.





Figure 6: Annotated post-accident photograph (BLT 0068) taken on February 1, 2020, at 6:35:24 a.m.

The post-accident photographs and video taken by Investigator Brandon Teates documented the truck in drive, with the parking brake not applied and with the engine running at approximately 500 RPMs at its point of rest. The police report indicates that the vehicle did not continue to move forward because the doors were open but that is incorrect. This will be discussed later in the report. As shown in Figure 7, the headlights were illuminated, and the front wheels were straight (not turned). The red arrow in Figure 7 points to a line of matted down grass that indicates the truck was traveling straight prior to coming to a stop. As shown in Figure 8, the truck came to rest approximately parallel to the road with its left side tires on the asphalt roadway and its right side tires in the grass that is just south of the roadway. A review of the post-accident police photographs showed that there were no obstructions in front of any of the truck's wheels that would significantly retard its forward motion.





Figure 7: Annotated post-accident photograph (BLT_0085) taken on February 1, 2020, at 6:35:24 a.m.



Figure 8: Post-accident photograph (BLT_0180) taken on February 1, 2020, at 7:44:01 (top) and post-accident photograph (BLT_204) taken on February 1, 2020, at 7:51:39 a.m. (bottom)



5.0 Accident Description

5.1 Police Investigative Narratives

The subject accident was photographed and investigated by Brandon Teates, a Crime Scene Investigator for the Biloxi Police Department (BPD). Investigator Teates testified that he arrived at 4:42 a.m. and witnessed the truck running and in drive but not rolling forward. He was incorrectly told that the vehicle did not roll forward because the doors were open, and he testified that he did not do any testing to determine why the vehicle wasn't moving. Investigator Teates performed a ballistics analysis and was able to determine that the bullet that left defect 1 in the driver's side of the hood of the truck was moving right to left, from the shooter's perspective, when it hit the vehicle. Investigator Teats could not determine the trajectory of the bullets that left the other three defects. He testified that the location of the three shell casings that were found did not help him identify the location of the weapon at the time of the shooting because the casings can bounce in any direction.²

Investigator Teates testified that Sergeant Robert Jolly took the scene measurements. These measurements included the location of the tires of the subject truck and police vehicle, the shell casings, the struck mailbox at 213 25th Street, and the location of a passenger side and driver side tire marks in the grass of 210 25th street. He testified that there was dew in the grass that allowed him to see these tire marks. The BPD accident scene drawing is shown in Figure 9. Investigator Teates' initial scene analysis includes, "Just west of the trucks location was a mailbox that was hit by the truck in the yard of 213 25th St. Damage occurred to the truck on the back passenger side when the collision occurred. The ground around the mailbox was disturbed indicating the post was pushed backwards. Tire impressions were seen in the grass of 210 25th St. that led to the mailbox."³

Sergeant Robert Jolly's investigative narrative includes, "I observed what appeared to be tire marks in the front grass yard of 210 25th Street, just west of the driveway. The marks stretched from the front of the structure out to the roadway, in line with the painted-green mailbox across the street. On the mailbox, I observed slight damage to the box's handle at the top of the door, and the ground where the mailbox

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² June 7, 2023, deposition of Brandon Teates, p. 31-32, 36-37, 40-42, 61-62, 72, 94 ex. 35

³ June 7, 2023, deposition of Brandon Teates, p. 47, 79, ex. 35

pole sat appeared to be freshly disturbed. I then went back to the suspect vehicle and I observed green paint marks on the top of the passenger side rear taillight consistent with the slight damage on the mailbox". His narrative further states that the height of the damage on the taillight was almost identical to the height of the damage on the mailbox. The red arrow on the left side of Figure 10 identifies green paint above the taillight of the truck that was more likely than not transferred from the mailbox. In addition, the right side of Figure 10 shows damage to the taillight cover and a scrape along the passenger side of the truck at the approximate height of the mailbox.

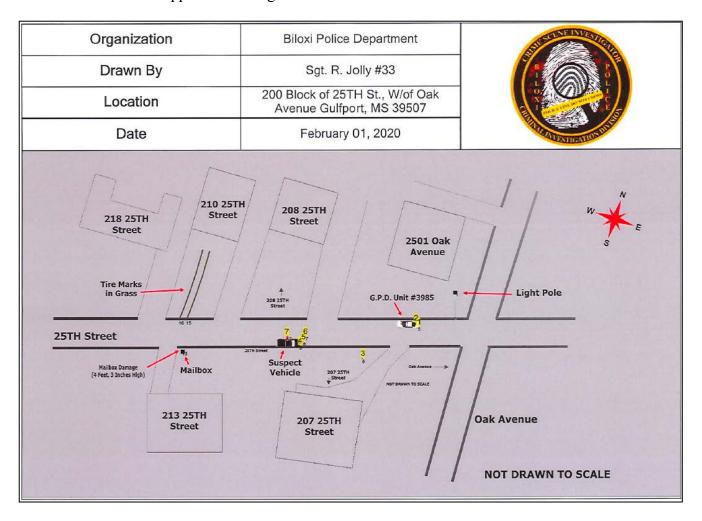


Figure 9: Biloxi Police Department Accident Scene Drawing





Figure 10: Annotated post-accident photograph (CSU_Garage (106)) taken on February 4, 2020, at 11:14:36 a.m. (left) and postaccident photograph (CSU_Garage (102)) taken on February 1, 2020, at 11:14:10 a.m. (right)

5.2 Witness Interviews and Testimony

Deborah Alred (2/1/20 Interview)

- She lives at 218 25th Street, the house immediately adjacent and west of 210 25th Street.
- She heard a lot of noise coming from the yard and then car doors shutting and thought maybe they were leaving and so she laid down.
- After laying down she heard more intense yelling from what sounded like a man and seconds after that she heard gunshots.
- She didn't hear a car accelerating.

Kendavien Baldwin (2/1/20 Interview)

- He lives at 210 25th Street and is 16 years old.
- He heard Kimberly Bonds and Derrin Markray fighting all night.
- He decided to head outside after he heard a crash.



As he was about to walk out the door, he heard a cop yell "get out with your hands up" and then "put your hands up" three times and then he heard four gun shots. He could not see the truck but did not hear it the engine rev up or the brakes being applied.

Stephanie Baldwin (2/1/20 Interview and 5/24/23 Deposition)

2/1/20 Interview

- o Before the police arrived at the home, Leonard pulled out of driveway and began to head down the street.
- She was in the front yard and heard a policeman yell Stop! Stop the car right now!
- She said that Leonard stopped his truck when the police told him to stop.
- She said that she saw one officer in the middle of the street closest to the driver's side of the truck prior to gunfire.

5/24/23 Deposition⁴

- o She testified that Mr. Parker needed to back around a car that was parked behind him prior to backing up across the street and hitting the neighbor's mailbox.
- o After he hit the mailbox, he started slowly driving down the street and then came to a stop. She estimates that the vehicle was traveling approximately 3-5 mph, a really slow roll, and did not rev its engine prior to coming to a stop.
- She testified that they were standing on the porch and her aunt asked her why Leonard was stopping, and she looked, and the truck was stopped. The truck did not move from this stopped location.
- She testified that she then walked to the edge of the driveway and saw someone walking and then heard the gunshots. The police officer was directly in front of the truck when he fired shots.
- The police officer didn't say anything until after the gunshots.
- "When I walked off the porch, his truck was still standing in the same spot by the time she made it to the end of the driveway. He wasn't driving it".

⁴ May 24, 2023 deposition, p. 64-68, 120-124, 147, 184, 195



Kimberly Bonds (2/1/10 Interview)⁵

- They parked behind Leonard's vehicle and her car is a black car.
- She saw Leonard back out of the yard and leave down the street.
- She noticed him slow down and said that Leonard's vehicle was kind of at a stop at this point. She then noticed flashlights and the gunshots.
- She saw brake lights.
- The truck was moving maybe 4 or 5 mph, like a slow creep.
- She believed the truck was in park because it didn't roll when Leonard's body fell out.

Jason Cuevas (2/6/20 Interview and 6/14/23 Deposition)

- 2/6/20 Interview
 - He came from railroad street and did not drive by the house before parking. He pulled in and turn his lights off. He never had his blue lights on.
 - Officer Cuevas stated that truck backed into a mailbox directly across the street from 210
 25th street.
 - He was initially walking down the middle of the road and began to move towards the south side of the road when the vehicle picked up in speed.
 - His interview included "as the vehicle was driving towards him, Cuevas said that he heard the engine pick up Vrom! And that is when he began to backpeddle from southside of the road. Cuevas said that the truck turned toward him on the southside of the road and that's when he discharged his weapon."
 - His interview also included, "when he discharged his weapon at the vehicle at which time the vehicle came to a complete stop as if it were thrown in park immediately."
 - He doesn't know how fast the vehicle was traveling but he heard the engine rev up and was moving faster than he was backpeddling.

⁵ At this time Kimberly Bonds has not given a deposition. If she does, I reserve the right to supplement this report.

- He was in front of the vehicle on the driver side. Both him and the vehicle moved towards the grass. He doesn't know if he ever made it to the grass.
- After discharging his weapon the passenger had his hands up and the driver had his hands down.
- He didn't approach the vehicle until another officer arrived. He asked the passenger to unlock the doors. Leonard was limp and fell on the ground face down.
- He doesn't know how far away the vehicle was when he shot it but when it stopped it was
 2 arms lengths away.
- o Matthew Brewer (William) was the next officer at the scene.

• 6/14/23 Deposition⁶

- o He testified that he had never responded to the subject address before the subject accident.
- He testified that he attempted to turn on his body camera after stepping out of the vehicle,
 but it didn't turn on.
- O He testified that once he got out of the vehicle, he could see the voices were coming from the residence two houses down. The porch lights were shining on people who were outside and talking loudly, basically arguing.
- As he started to walk towards the people outside, he was on the north side of 25th street and shining his flashlight on the white mailbox ahead of him to try and read the address (208 25th Street).
- As he was walking up to the white mailbox (208 25th Street) and trying to determine the address on the mailbox he observed the truck slowly backing out. It appeared to be maneuvering around other vehicles, or something, and was traveling at a relatively slow speed to maneuver through whatever was in the yard. There were a couple cars parked to the east of the truck.

⁶ June 14, 2023, deposition of Jason Cuevas, p. 23-24, 47, 51-52, 64-67, 70-83, 89, 94-95, 105-110, 118, 120-121, 127-128, 133, 141-145



- He witnessed the truck strike the mailbox on the south side of 25th Street (213 25th Street).
 He doesn't know if he was in the asphalt or grass at this time, but he was pretty much aligned with the mailbox (208 25th Street).
- He could hear the impact with the mailbox across the street and the mailbox appeared to have been pushed back. The truck stayed stationary for a second after hitting the mailbox and he believed the driver was going to get out and assess the damage.
- When the truck hit the mailbox, the deponent had not reached the 208 25th Street mailbox yet, he was a little bit away. He then directed his flashlight to the truck and changed his path to walk in a southwestern direction towards the vehicle to contact it.
- o After he started walking towards the truck it began to travel slightly northeast onto the roadway and then turned to the right to get straight onto 25th Street going eastbound.
- Once the truck turned eastbound and was more or less in the middle of 25th Street the deponent continued to walk toward the vehicle because he assumed they were going to slow roll up to him and so he could make contact with the driver.
- O As the vehicle kept slow rolling, he activated his strobe function to alert the driver that there was something to the left of his path. He was standing in the center of the roadway at this time. He didn't walk directly into the front of the GM's path as much as he was walking towards the center of the road because he assumed the vehicle was going to come to a stop so he could make contact with them.
- He heard the RPMs pick up and it started to accelerate to a speed that he perceived as more than 5 mph. This occurred right before he gave the commands to stop the vehicle.
- O He began backpedaling towards the south side of the road to get out of the path of the vehicle. He back pedaled to the south side of the road because he was closer to that part of the road, and he assumed that if he got out of the roadway that the vehicle would be able to pass by him on his right side. When he started backpedaling the vehicle was moving toward the direction that he was backpedaling to, the south side of the street and so the tires had to be turned in his direction.



- O He said, stop the vehicle sir, stop the vehicle. After the first time he said stop he pulled out his firearm so that he would have a second flashlight. At this time, he was in front of the center of the vehicle, where the logo is. The vehicle continued and he said stop the vehicle, stop the vehicle, police, stop the vehicle.
- O He was directly in front of the truck when he discharged his firearm three times in rapid succession between the 12 (police measurement of "blood on ground near d/s door of suspect vehicle", which is to the north of the truck) and 3 (where he testified he discharged his third and final round in front of the truck) in ex. 49. He testified that he was at the location of the silver X in Figure 11 when he fired his third shot. According to this description he was moving in a southeast direction as he discharged his firearm in rapid succession.
- Right after he discharged his third shot the vehicle looked like when you throw it in park
 while you're driving. It stayed in position and its body rocked back and forth due to the
 sudden and abrupt stop.
- O He instructed the driver to unlock the doors, but the driver did not respond. He instructed the passenger to unlock the doors, who complied. When he opened the driver's door and tried to remove Mr. Parker from the vehicle, he realized that Mr. Parker had no control over his body and fell to the ground.





Figure 11: Ex. 50 of Jason Cuevas' deposition

Michelle Desroche (Interviews)

- She was awake and smoking a cigarette under her carport at 213 25th Street.
- She heard a guy screaming and someone else trying to get him to calm down and get in the car and leave.
- She heard the vehicle hit something. Immediately after whatever was hit she heard 4 gun shots. She did not hear an officer say anything and was surprised when she heard gunshots.

Starlet Evans (2/1/20 Interview)

- Kimberly Bonds and Derrin Markray were arguing for a couple hours.
- They convinced Mr. Markray to go to a hotel when they told him they would call the police if he wouldn't go.
- She saw them get into the truck and start to back out and she went inside.

- While inside she heard five gunshots.
- When the officer opened the door Mr. Parker fell to the ground.

Angela Jackson (2/1/20 Interview and 6/12/23 Deposition)

• 2/1/20 Interview

- When she came outside [Leonard] was backing out. [Leonard] was in front of [the black]
 car and had to come out at an angle. He took his time backing out because [the car] was like right there.
- o Angela saw the police park his car down the road and get out and walk towards the house.
- Angela said that the officer was hollering and that Leonard stopped the truck and next thing she knew was boom, boom, boom!
- o Leonard's truck was barely moving as he started down the street.
- Angela said that she saw everything and that she was standing in front of her cousin's sister's black car.

• 6/12/23 Deposition⁷

 She testified that she could walk faster than the vehicle was moving and that it came to a stop before the shots were fired.

Derrian Tremaine Markray (2/1/20 Interview and 5/22/23 Deposition)

• 2/1/20 Interview

o He parked behind [Leonard's] truck when he arrived earlier in the night.

- o He knew it was a policeman but doesn't think Leonard knew that it was.
- He said that the officer put some pep in his step trying to get on the other side of the road.
 The truck was going 2 to 3 mph. He said that it was dark in the street.
- The truck was not going fast because they had just pulled out of the driveway. He heard the officer say "Stop!" but Leonard didn't stop. He said that the officer's exact words

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⁷ June 12, 2023, deposition of Angela Jackson, p. 125-127



were "stop the vehicle". He stated that the officer said this 2 or 3 times. He said that the vehicle was going 2 to 3 mph.

O At 8:30:20 in the video he said that he would have thought that he was going to get run over if he was in the officer's shoes.

• 5/22/23 Deposition⁸

- O He testified that he did not tell the truth during his interview with the police because he was scared for his life after witnessing the police officer shoot Leonard. His testimony that differs from his interview answers include the following:
 - He testified that Leonard brought the vehicle to a stop before the shooting.
 - He testified that he did not hear the police officer give any commands like stop before shooting.
- He testified that the officer probably thought that they were going to hit him because they
 were facing the officer, but they were not moving.
- O He testified that their windows were up and that they did not have the radio on in the truck. Leonard didn't say anything to him in the car as they started moving forward on 25th street and before the shooting.
- He testified that they were traveling 2-3 mph before they encountered the police, just barely moving.

Geraldine McNair (2/1/20 Interview and 5/25/23 Deposition)

• 2/1/20 Interview

- o She was outside and helping them back out of the front yard.
- She said that when Leonard was moving slow when he began to go up the street.
 Leonard's truck wasn't going faster than 5 mph.
- She said that the truck was not moving at the time of the gunfire and that it didn't move after Leonard fell out of the truck.
- o The police officer was on the driver's side during the shooting.

⁸ May 22, 2023 deposition of Derrian Tremaine Markray, p. 35, 88-96, 192, 201, 209-210



- Mr. Markray unlocked doors and Leonard fell out.
- 5/25/23 Deposition⁹
 - She testified that prior to the shooting she was in the middle of 25th Street and was in line with the door of the truck that had already stopped when she heard gunshots.
 - She testified that the truck stopped before the shots were fired, and that the vehicle did not move towards the police officer.

Maxine Owens (2/1/20 Interview and 5/24/23 Deposition)

2/1/20 Interview

- She saw a police car on Oak Street that passed by 25th street. She tapped on Leonard's windshield and told him that the police are right there and to let them handle it. Stephanie told her that she just wanted Mr. Markray away from her house.
- When [Leonard] pulled forward, he had to go up a little bit to miss Kim's car and he went all the way back and hit the mailbox across the street.
- She said that he pulled off and then stopped. She then heard pop pop pop.
- Leonard was driving so slow that the truck barely moved.... "you can't get run over for no 4 or 5 mph".
- She didn't hear any commands from the officer prior to the gunfire.
- Maxine said that Leonard had stopped before the gunfire and that his brake lights were on.
- It sounded like "pop, pop, pop, pop".
- 5/24/23 Deposition¹⁰
 - She testified that Leonard went straight into the mailbox across the street.
 - After hitting the mailbox Leonard was "barely moving" and straightened up the truck towards Oak Street.

¹⁰ May 24, 2023, deposition of Maxine Owens, p. 47, 54-56, 61-63, 69, 96

⁹ May 25, 2023, deposition of Geraldine McNair, p. 29-30, 44, 85



- She testified that the truck was by the white picket fence when the truck straightened out and at that time and location she saw the brake lights come on and the truck stopped and did not move from that stopped location.
- She testified that she then heard four shots after she saw the brake lights and that the officer yelled "Stop the truck, Gulfport Police" after shooting.

Shelly Owens (2/1/20 Interview)

- She guided Mr. Parker to maneuver his truck around the black Altima and after he got around the Altima she went inside.
- She was half-way into the living room when she heard 3-4 gunshots.
- After the gunshots she heard the officer say to put your hands up.
- When the officer opened the door Mr. Parker rolled out of the truck and onto the ground.

Tahjmaleke Harris (2/1/20 Interview)

He was inside 210 25th Street at the time of the shooting and heard popping about 6 times.

7.0 Fusion Engineering Site Inspection and Methodology Used

On June 15, 2023, I conducted a site inspection of 25th Street in Gulfport, Mississippi. The road had been resurfaced since the date of the accident, but the new asphalt covered the same approximate footprint (length and width) as the asphalt did on the day of the accident. In addition, there were numerous items, such as the houses and driveways, that did not change. I parked my rental truck on the north side of 25th Street (Figure 12), just west of the Dead End sign and near the location that Officer Cuevas parked his vehicle (Figure 4).





Figure 12: Photograph from Fusion Engineering's June 15, 2023, Site Inspection

Of note, the green mailbox at 213 25th Street had been replaced with a white mailbox at the same approximate location. The new mailbox is shown in Figure 13 and Figure 14 and a comparison to Figure 3 demonstrates that the mailbox location has not substantially changed. The white mailbox at 208 25th Street remained the same.

In addition to taking photographs from the ground, I utilized a DJI Mavic 2 Pro drone to capture aerial images. Figure 15 and Figure 16 are two of the aerial images that I captured during this inspection. To assist in surveying the scene, I utilized Propeller AeroPoints (GPS pads) as ground control points. I later processed the aerial images and ground control point within Pix4D Mapper and generated a 3D point cloud of the site (Figure 17) and an Orthomosaic map of the site (Figure 18). During the inspection I also laser scanned the site with a Faro Focus S350 laser scanner. This allowed me to capture the geometry at the ground that was blocked by the tree foliage. The methodology and tools I utilized to survey the accident site are commonly used by accident reconstructionists to accurately capture the 3D geometry of an accident site.





Figure 13: Photograph of the new mailbox at 213 25th Street from Fusion Engineering's June 15, 2023, Site Inspection



Figure 14: Photograph looking south from the yard at 210 25th Street from Fusion Engineering's June 15, 2023, Site Inspection





Figure 15: Annotated nadir aerial image taken during Fusion Engineering's June 15, 2023, Site Inspection



Figure 16: Annotated perspective aerial image taken during Fusion Engineering's June 15, 2023, Site Inspection





Figure 17: 3D point cloud generated from Fusion Engineering's June 15, 2023, Site Inspection



Figure 18: Orthomosaic map generated from Fusion Engineering's June 15, 2023, Site Inspection

I drove a 2019 Ford F-150 truck bearing the VIN 1FTMF1EB7KFC49332 to the inspection. This truck had a 122-inch wheelbase, a 20.4 foot turning radius and a curb weight of 4,343 lbs. The truck was four wheel drive, but I left it in 2H (rear wheel drive), to better match the drivetrain of the subject truck. During the inspection I drove the approximate route taken by Mr. Leonard just prior to the shooting to demonstrate the steering wheel inputs required to arrive at the point of rest from his starting position near the mailbox at 213 25th Street. I started in the vard of 210 25th Street (left side of Figure 19) and backed up until the right rear corner of the truck was just past the mailbox at 213 25th Street (right side of Figure 19). I then drove forward and turned the steering wheel to the right to head east on 25th Street. I continued to input the right-hand turn until the truck was no longer parallel to the street and was heading southeast towards the south side of the street (left side of Figure 20). In order to end up with my right side tires in the grass and the vehicle approximately parallel to the street, I had to turn the steering wheel to the left and then allow it to come back to center before coming to a stop at the approximate postaccident point of rest (right side of Figure 20). In order to come to a stop at the point of rest, I had to apply my service brake. After I brought the vehicle to a stop at the point of rest, I released the service brake, and the vehicle began to slowly roll forward. On the day of my inspection the grass and ground were dry near the point of rest.



Figure 19: Run 5 from Fusion Engineering's June 15, 2023, Site Inspection





Figure 20: Run 5 from Fusion Engineering's June 15, 2023, Site Inspection

8.0 Fusion Engineering Inspections of Exemplar Trucks

On June 14, 2023, I inspected a 2015 GMC Sierra 1500 SLE Crew Cab 2WD bearing the VIN 3GTP1UEC8FG170648. This truck had the same specs as the subject truck. During this inspection I confirmed that the truck did not have a feature that would prevent it from rolling forward when the driver's door was open. I also confirmed that the display on the dash only indicated that the vehicle was in drive when it was indeed in drive. When I shifted between neutral and drive the indicator turned off. I also confirmed that the parking brake light turns on next to the RPM dial when the parking brake is applied. The subject truck's parking brake light was not illuminated after the accident.

On June 22, 2023, I inspected a 2014 GMC Sierra 1500 SLE Crew Cab 2WD bearing the VIN 1GTR1UEC5EZ365324. The truck had the same specs as the subject truck. During this inspection I confirmed that the truck did not have a feature that would prevent it from rolling forward when the driver's door was open. The purpose of this second exemplar inspection was to measure how many pounds of force it would take to prevent the truck from rolling while the engine was running at idle (approximately 500 RPM), and the vehicle was in drive. I conducted this test on a parking lot surface that was approximately 0.75 degrees downhill and I measured 258 pounds to hold the vehicle. Adjusting this value for level ground results in a force of 189 pounds to hold the vehicle. Thus, the vehicle's tractive force while idling at 500 RPM and in drive is approximately 189 pounds.

9.0 Analysis and Discussion

To better analyze the accident, the measurements taken by the police were input into the 3D site geometry that was captured during the Fusion Engineering site inspection. In addition, a digital model of a 2014 GMC Sierra 1500 Crew Cab was input as well. The vehicle was oriented at its point of rest based on the police measurements (D/S front tire (10) and D/S rear tire (11)) and post-accident scene photos. Figure 21 shows the truck at its point of rest with the police measurements overlayed on the 3D site geometry that was captured with the laser scanner.



Figure 21: Digital model of an exemplar truck at its point of rest



The vehicle was also oriented at its initial contact with the mailbox in a similar manner. The left front and right front wheels were aligned with police measurement points 15 and 16 that correspond to the police identified passenger and driver side tire marks in the grass in the front yard of 210 25th Street and the vehicle was driven backwards in a straight line until the right rear tail light contacted the mailbox at 213 25th Street, as shown in Figure 22. It is possible that the truck was at a slightly different angle when it impacted the mailbox due to steering input or the police not marking the correct location in the grass, but that possibility does not affect my analysis.

As discussed above, the red arrow on the left side of Figure 10 identifies green paint above the right rear taillight of the truck that was more likely than not transferred from the mailbox. In addition, the right side of Figure 10 shows damage to the taillight cover and a scrape along the passenger side of the truck at the approximate height of the mailbox. It is unknown if all or some of this additional damage was caused as Mr. Parker backed out just prior to the shooting. It is likely that the truck backed up an additional few feet beyond what is shown in Figure 22, but that possibility does not affect my analysis.



Figure 22: Digital model of an exemplar truck at its initial contact with the 213 25th Street mailbox



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The location of the truck when it impacted the mailbox (Figure 22) and at its point of rest (Figure 21) along with the police measurements were overlayed onto (1) the police drawing, (2) the Fusion site inspection Orthomosaic, (3) the Fusion site inspection Orthomosaic and 3D laser scan geometry and (4) the Fusion site inspection 3D laser scan geometry. These four diagrams are attached as Appendix C. Based on the analysis discussed above and the driving that I performed during my inspection; the truck traveled approximately 80-85 feet from the mailbox at 213 25th Street to its point of rest.

Based on the measurements taken during my inspection and the laser scan data, 25th Street is approximately flat (longitudinally) at the post-accident point of rest. At the time of my inspection the slope at this location was 0.1 degrees uphill. This measurement, along with an analysis of the postaccident photos that were taken by the police and do not show any obvious slope, implies that that the road was also approximately flat at the time of the accident. Thus, there was no incline that prevented the truck from rolling forward at this location with the engine running at idle and the transmission in drive.

When a vehicle is driving there is a relatively small force that is retarding its motion that is called rolling resistance. This force is typically assigned as a dimensionless rolling resistance coefficient (RRC) that is defined as the value of the rolling resistance force divided by the wheel load¹¹. If two vehicles have the same RRC the heavier vehicle will require a larger force to initiate movement because the heavier vehicle will have a larger rolling resistance force retarding its motion. A passenger vehicle tire on asphalt has an RRC of approximately 0.01 and a passenger vehicle tire on grass has an RRC of approximately 0.06-0.11¹². Considering the weight of the subject truck and the exemplar testing discussed above, a RRC of 0.07 for the right-side tires would prevent the vehicle from rolling forward. A RRC of 0.06 would be close to preventing the vehicle from rolling forward. To keep the vehicle stationary with neither the service nor parking brake applied, the vehicle's rolling resistance at the post-accident point of rest must have been greater than the tractive force generated by the truck (approximately 189 pounds) with

¹¹ Tires and Passenger Vehicle Fuel Economy, National Research Council, Transportation Research Board, 2006

¹² The determination of the rolling resistance coefficient of a passenger vehicle with the use of roller test bench method, MATEC Web of Conferences (2019)



its engine idling and its transmission in drive. Simply put, the vehicle will not move until the tractive force is greater than the rolling resistance.

If the vehicle is moving, it will continue to roll until the vehicle's momentum is slowed and brought to a stop by the rolling resistance or the application of the brake. A kinematics analysis was performed to determine a minimum value for how long and far the vehicle would roll at various speeds with a lower and upper bound of rolling resistance and the brake not applied. These kinematic equations are commonly used to assess the motion of objects with respect to speed, distance, acceleration, and time. These are conservative calculations that do not include the tractive force generated by the truck idling that would increase these times and distances. If the vehicle's average RRC was 0.035 (approximate lower bound for the subject vehicle and location) and it was traveling at 5 mph, it would continue to roll for approximately 6.5 seconds and 24 feet before stopping if the service brake was not applied. If the vehicle was traveling at 10 mph with an RRC of 0.035 it would continue to roll for approximately 13.0 seconds and 95.5 feet before stopping if the service brake is not applied. If the vehicle's combined RRC was 0.06 (approximate upper bound for the subject vehicle and location) and was traveling at 5 mph, it would continue to roll for approximately 3.8 seconds and 14 feet before stopping if the service brake is not applied. If the vehicle was traveling at 10 mph with an RRC of 0.06 it would continue to roll for approximately 7.6 seconds and 56 feet before stopping if the service brake is not applied.

The testimony indicates that the truck was either stopped prior to the shooting or that it stopped immediately after the shooting. Under the scenario where the vehicle was brought to an immediate stop after the shooting, Mr. Parker must have applied his service brake. Officer Cuevas testified that he discharged his firearm in rapid succession. Officer Cuevas also testified that it appeared that Mr. Parker had no control over his body when he later opened the driver's door. It is unknown if Mr. Parker could have applied the service brake after being shot at and hit.

Under the scenario where the truck was already stopped prior to the shooting and the service brake was not applied, Mr. Parker must have been traveling at a slow rate of speed and coasted to a stop solely due to the rolling resistance force of the vehicle. Alternatively, Mr. Parker could have utilized the service



brake to stop his vehicle prior to the shooting, consistent with the several witnesses that testified that they saw his brake lights.

As shown in Figure 7 and Figure 8, the truck was traveling straight and approximately parallel to the road prior to coming to a stop. As discussed above, to get to the post-accident point of rest, Mr. Parker must have turned the steering wheel to the left and then allowed it to come back to center before coming to a stop. If he didn't do this the vehicle's heading would not be approximately parallel to the road at the point of rest. The physical evidence is consistent with Mr. Parker pulling over and bringing his vehicle to a stop and not consistent with a vehicle that only had a right steering wheel input after pulling forward from the mailbox.

10.0 Opinions and Conclusions

Based on my review and analysis of this case, and my education, training and experience as a professional engineer and an accident reconstructionist, I have the following opinions held to a reasonable degree of engineering certainty:

- 1. The subject truck traveled approximately 80-85 feet from its stopped position near the 213 25th Street mailbox to its stopped position at the point of rest.
- 2. While driving forward from the stopped position near the 213 25th Street mailbox, Mr. Parker must have turned the steering wheel to the right and then to the left for the vehicle to reach the point of rest while oriented approximately parallel with the road.
- 3. The physical evidence is consistent with Mr. Parker pulling over and traveling straight and approximately parallel to the road prior to coming to a stop and not consistent with a vehicle that only had a right steering wheel input after pulling forward from the mailbox.
- 4. 25th Street is approximately flat (longitudinally) at the post-accident point of rest.
- 5. To keep the vehicle stationary with neither the service nor parking brake applied, the vehicle's rolling resistance at the post-accident point of rest must have been greater than the tractive force generated by the truck (approximately 189 pounds) with its engine idling and its transmission in drive.



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- 6. Under the scenario where the vehicle was brought to an immediate stop after the shooting, Mr. Parker must have applied his service brake. It is unknown if Mr. Parker could have applied the service brake after being shot at and hit.
- 7. Under the scenario where the truck was already stopped prior to the shooting and the service brake was not applied, Mr. Parker must have been traveling at a slow rate of speed and coasted to a stop solely due to the rolling resistance force of the vehicle. Alternatively, Mr. Parker could have utilized the service brake to stop his vehicle prior to the shooting, consistent with the witnesses that testified that they saw his brake lights.

This concludes my report to date. If new information becomes available, please forward it for my review and analysis. If any of my conclusions change or need to be supplemented due to new information, I will supplement this report accordingly. If you have any questions or require clarification, please feel free to contact me directly.

Respectfully Submitted,

John Stamm, P.E.

Senior Engineer

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Appendix A

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Depositions

Baldwin, Stephanie deposition 5-24-23

Cuevas, Jason deposition and exhibits 6-14-23

Jackson, Angela deposition and exhibits 6-12-23

Markray, Derrian deposition & exhibits 5-22-23

McNair, Geraldine deposition & exhibits 5-25-23

Owens, Maxine deposition 5-24-23

Teates, Brandon deposition & exhibits 6-7-23

Document Production

20-002246 DIGITAL CASE FILE

Plaintiff Initial Disclosure Documents (PL PARKER 000001-269)

Plaintiff's Second Disclosures

Legal

Answers of Defendant Cuevas to Qualified Immunity Interrogatories Propounded by the Plaintiff

Biloxi Police Department's Response to Defendants' Subpoena - 4.6.23-42789

Final Plaintiff's Response to Defendant Jason Cuevas' First Set of Interrogatories

Parker Verification

Plaintiff's Response to Defendant Jason Cuevas' First Set of Interrogatories

Plaintiff's Second Amended Complaint at Law

Miscellaneous

Audio Interviews - Angela Jackson

Audio Interviews - Derrin MarKray

Audio Interviews - Geraldine McNair

Audio Interviews - Jason Cuevas

Audio Interviews - Kimberly Bonds

Audio Interviews - Maxine Owens

Audio Interviews - Michelle, Desroche



Audio Interviews - Stephanie Baldwin

Interviews - Angela Jackson

Interviews - Derrian Markray

Interviews - Geraldine McNair

Interviews - Jason Cuevas

Interviews - Kimberly Bonds

Interviews - Maxine Owens

Interviews - Redacted Case File

Interviews - Stephanie Bonds

Interviews - William Brewer

Photos and Videos

20-002246 OFFICER VIDEO & PHOTOS

20-002246 SCENE VIDEO & PHOTOS DISC 1

20-002246 SCENE VIDEO & PHOTOS DISC 2

Exhibit 77-03

RMS Photos

Reports

2021-05-14, REW emailed JLM redacted witness statement synopsis

Biloxi PD Call Sheet Incode 20002246

Biloxi PD Case Management Incode 20002246

Biloxi PD Incident Report Flex 20002246

Biloxi PD Incident Report Incode 20002246

Biloxi PD Property Room Report 20002246

Biloxi Report, 01-02

Biloxi Report, 02-02

Leonard Parker, MBI Synopsis

MBI- Case File Report

MBI- Incident Report

Report Attachments

Appendix B



John J. Stamm, P.E.

Senior Engineer 331-229-3327 direct 630-738-0205 mobile jstamm@fusioneng.com

PROFESSIONAL PROFILE

John Stamm is a Senior Engineer in the Mechanical Engineering group at Fusion Engineering and has over 10 years of experience in accident investigation and the analysis of mechanical systems. This includes analyzing potential design alternatives and their effect on specific components as well as the entire system. Mr. Stamm specializes in accident reconstruction and design analysis for passenger vehicles, commercial vehicles, and off-highway equipment, with an emphasis on aerial lifts. Mr. Stamm's education, training and experience focuses on technical accident investigation and reconstruction. His experience includes vehicle dynamics, vehicle and machine inspections, site and scene inspections, physics-based accident reconstruction software (2D and 3D), and event data recorder analysis. In addition, Mr. Stamm has been involved in the design and analysis of both component and full vehicle testing.

EXAMPLES OF AREAS OF EXPERTISE

Mobile Elevating Work Platforms	Accident Investigation	Industry Standards	
Commercial Vehicles	Accident Reconstruction	OSHA and DOT Regulations	
Passenger Vehicles	Failure Analysis	Mechanical Systems	
Off-Highway Equipment	Machine Design	Mechanical Testing	

ACADEMIC CREDENTIALS

B.S. University of Illinois, Urbana-Champaign, IL – General Engineering (2009)

PROFESSIONAL REGISTRATION

Licensed Professional Engineer in the State of Illinois (License 062.065864)

CERTIFICATIONS

SAE – Accident Reconstruction Certificate Program

FAA Remote Pilot Certificate for Small Unmanned Aircraft Systems (Drones)

IPAF PAL Card – Mobile Scissor Lifts (type 3a) and Mobile Boom Lifts (type 3b)

Operation of Powered Industrial Trucks

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CONTINUING EDUCATION

World Reconstruction Exposition (2023)

SAE – Reconstruction and Analysis of Rollover Crashes of Light Vehicles (2021)

SAE – Vehicle Crash Reconstruction: Principles and Technology (2021)

Advanced HVE – Part 1 and 2, Engineering Dynamics Corporation, HVE Virtual Forum (2021)

SAE – Applying Automotive EDR Data to Traffic Crash Reconstruction (2020)

IPAF Mobile Elevated Work Platform Operation Training (PAL CARD), Construction Safety Council (2020)

OSHA and ANSI Standards for Machinery Guarding, Stability Technology, Inc. (2019)

Advanced HVE – 2D Workshop, Engineering Dynamics Corporation, HVE Forum (2018)

The Basics of Internal Combustion Engines, Society of Automotive Engineers (2017)

A Familiarization of Drivetrain Components, Society of Automotive Engineers (2017)

Introduction to Brake Control Systems, Society of Automotive Engineers (2017)

Driver Distraction from Electronic Devices: Insights and Implications, Society of Automotive Engineers (2017)

Introduction to Weibull Solution Methods, Society of Automotive Engineers (2017)

Confined Space Entry for General Industry, OSHA (2015)

Fall Protection Course, OSHA (2015)

Stairways and Ladders Course, OSHA (2015)

Vehicle Dynamics for Passenger Cars and Light Trucks, Society of Automotive Engineers (2014)

Safety on the Move Training Program in the Safe Operation of Powered Industrial Trucks, Associated Integrated Supply Chain Solutions (2011, 2014, 2017, 2020)

John Stamm, P.E. Senior Engineer

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AFFILIATIONS/MEMBERSHIPS

American Society of Mechanical Engineers (ASME)

Society of Automotive Engineers (SAE)

PREVIOUS EXPERIENCE

Staff Engineer, ITC Experts, Sugar Grove, Illinois, 2011-2014

Engineering Consultant, Packer Engineering, Naperville, Illinois, 2009-2011

Process Flow Engineering Consultant, Flink, Streator, Illinois, 2008

Public Works Engineering Internship, DuPage County, Illinois, 2006-2008

PROJECT HIGHLIGHTS

Vehicle Accident

An accident occurred where a tow truck impacted the side of a minivan in the middle of an intersection. Mr. Stamm was retained years after the accident when the minivan and truck were both missing and thus unavailable for inspection or CDR imaging. Mr. Stamm was asked to determine the impact speed of both vehicles and the status of the traffic lights at the time of impact. Mr. Stamm traveled to the subject intersection and surveyed the scene. He then utilized the physics-based simulation analysis tool EDSMAC4 in order to reconstruct the accident and analyze the different traffic light scenarios (who had the red light) based on the traffic light timing schedule produced by the city and the witness testimony.

Winch Accident

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An accident occurred where a winch operated tailgate on a trailer fell and injured a man standing underneath it. Mr. Stamm first pointed out that using a winch in a hoisting operation is improper. Mr. Stamm then went to the accident scene to inspect both the subject winch and trailer. With these measurements, Mr. Stamm cut a window in an exemplar winch and mounted it in a substantially similar orientation to how it was mounted on the subject trailer. In addition, he modified the exemplar winch to match the damage found on the subject winch. Mr. Stamm then conducted a demonstrative test that showed how the accident occurred and how this was only possible after the winch had been damaged. Further, Mr. Stamm determined that the design alternatives presented by the opposing expert would not have prevented the accident and that they would eliminate an advantageous feature of the winch. Finally, Mr. Stamm determined through a force

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John Stamm, P.E.

Senior Engineer

analysis that the damage to the subject winch was created with deliberate abuse and misuse. This analysis was supported with additional demonstrative testing on another exemplar winch.

Industrial Accident

An accident occurred in a warehouse equipped with an Automated Storage Retrieval System (ASRS) where a worker who was on top of the cab of the ASRS was crushed between the cab and the mast cap of the ASRS. The allegations were that this type of operation with a worker on top of the cab was foreseeable to the manufacturer and that a photoelectric eye would have prevented the accident. After analyzing the appropriate standard and subject ASRS, Mr. Stamm determined that the subject ASRS met all of the requirements of the ANSI standard. Further, Mr. Stamm determined that there would be no motivation for an operator to get on top of the cab during reasonably foreseeable use and misuse and that putting a presence sensor on top of the cab would suspend the cab and operator whenever a product fell on top of the cab from the surrounding storage racks. Finally, Mr. Stamm determined that the employer violated the ANSI standard as well as OSHA when they unilaterally implemented their building maintenance procedure that included misusing the subject ASRS system.

Vehicle Accident

An accident occurred when a cargo van was impacted from the rear by a fully loaded dump truck and trailer. The strength of the bulkhead became an important issue and it was necessary to determine the load applied to it. Mr. Stamm took measurements that were collected from the scene to reconstruct the accident and generate the necessary acceleration values that were used to calculate the load on the bulkhead.

Stability Accident

An accident occurred in a public area when a palm tree that was being braced by pressure treated 2x4s fell over during a storm and injured a woman walking by it. There were questions related to how the 2x4s were oriented with respect to the tree and the number of 2x4s used. Mr. Stamm generated a worksheet illustrating how the force in each 2x4 would change based on the different orientations of the 2x4s. The stability equations he generated took into account various wind angles and forces. Mr. Stamm then tested exemplar 2x4s to determine their strength in compression and the fastening strength of nails in the wood in tension. Mr. Stamm combined all of this to determine the structural stability of the designed and as-built bracing systems.

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Mobile Elevating Work Platform Accident

An accident occurred when a worker maneuvered the platform of an articulating boom lift into energized power lines and electric current was carried down a power washing hose to the ground where a worker was standing. Mr. Stamm was asked to perform an accident reconstruction based on the available physical evidence and testimony. In order to do this, Mr. Stamm captured the subject scene geometry with a laser scanner and manipulated a computer-generated articulating boom lift in this digitally captured environment.

End of CV

1804 Centre Point Circle, Suite 112, Naperville, IL 60563 **Exhibit "A"** www.fusioneng.com Phone: 630-466-4065

John J. Stamm, P.E. Testimony Record

Project Name: Alberto Morales v. South Side Towing, Inc. and Ramsi Abdallah

Case Number: 16 L 10234

Circuit Court of Cook County, Illinois Location:

Date: April 23, 2019

Deposition

Project Name: Pendleton v Stageman et al.

Case Number: 1:19-CV-04908

Northern District of Illinois Eastern Division Location:

Date: August 4, 2021

Deposition



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2023 Fee Schedule

General:

- Services will be billed on a monthly basis
- Payment is due within 30 days of date of invoice
- Deposition and court testimony are billed in half day increments
- Travel time is billed portal to portal

Professional Services:

•	Michael Rogers, P.E.	\$425 per hour
•	James Salmon, Ph.D., P.E.	\$380 per hour
•	Robert S. Giachetti, Ph.D., P.E.	\$390 per hour
•	Mark Fleming, Ph.D., P.E.	\$375 per hour
•	Aaron Jones, P.E.	\$350 per hour
•	Christopher L. Eikey	\$350 per hour
•	Steven T. McCaw, Ph.D.	\$340 per hour
•	Kevin Jones, P.E.	\$325 per hour
•	Eric R. Holton, Ph.D., CPE, CSP	\$300 per hour
•	Nicole Schimpf, P.E	\$295 per hour
•	John Stamm, P.E.	\$275 per hour
•	Kunihiro Nakamoto, Ph.D.	\$275 per hour
•	Thomas Bundorf	\$240 per hour
•	Thomas Walega, ASE, CVFI	\$205 per hour
•	James Jenkins, CFI, CFEI, CVFI	\$195 per hour
•	Jean-Pierre Wolfe	\$165 per hour

Expenses:

•	Mileage (2023 IRS rate)	\$.625 per mile
•	Other Travel, Lodging, Meals, Parking, Airfare, Tolls	Cost
•	Specialty Supplies and Materials	Cost
•	Outside Lab Services	Cost

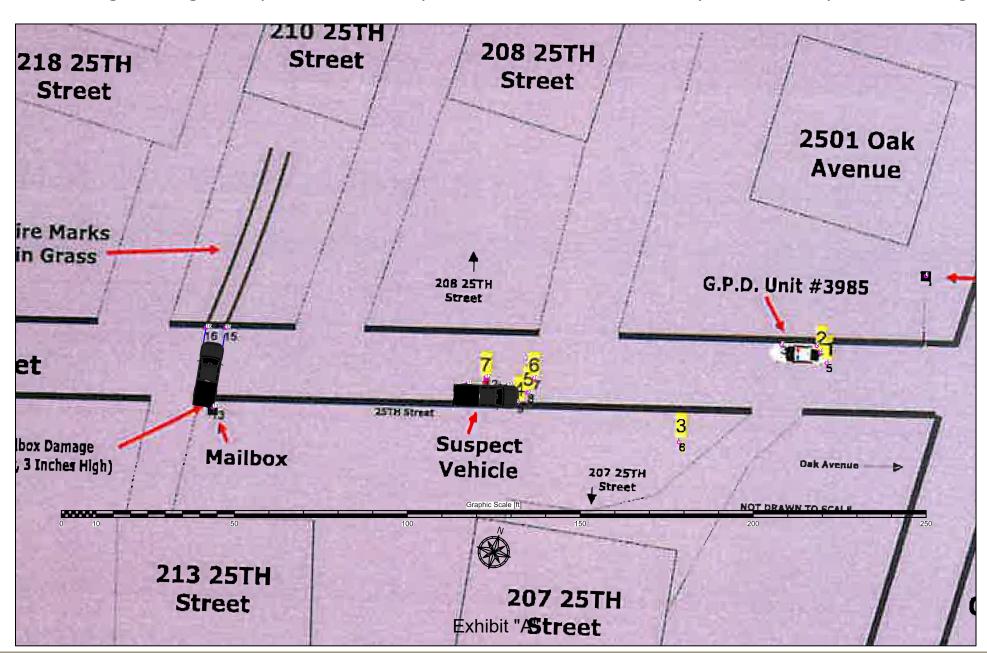
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Appendix C

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Fusion Engineering truck placements and police measurements overlayed onto the police drawing





Fusion Engineering truck placements and police measurements overlayed onto the Pusion Engineering site inspection Orthomoasic





Fusion Engineering truck placements and police measurements overlayed onto the Pusion Engineering site inspection Orthomoasic and 3D laser scan geometry





Fusion Engineering truck placements and police measurements overlayed onto the Pusion Engineering site inspection 3D laser scan geometry



